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ACCURATE LANGUAGE.

The charge may be justly made, that, in many of our schools, precise and correct expression of thought is often grossly neglected. Many causes conspire to induce, on the part both of teacher and pupil, the habit of using sentences which are, in some cases, incomplete and ungrammatical, and in other cases, utterly devoid, in themselves, of any meaning whatever.

We propose, at present, to refer to only one of these causes, namely, the loose and unscholarlike language of many of our popular text books. For the sake of illustration, we will first examine a little more than one page of the University Edition of an Algebra, which holds, we presume deservedly, a high rank among the many valuable mathematical treatises now used in our common schools. We select the tenth page, and three lines on the eleventh page, for examination; and will make quotations with remarks and queries.

1. “*Two quantities, one above another, as numerator and denominator, thus $\frac{a}{b}$, indicates that a is divided by b .*”

REMARK.—If this be true, then the expression $\frac{m}{n}$ indicates that a is divided by b .

2. "Double horizontal lines, thus, $=$, represent equality."

QUERY. — Of how many double lines does the symbol in question consist? Does not the author mean two horizontal lines or one double horizontal line?

3. "Points between terms, thus, $a : b :: c : d$, represent proportion, and are read, as a is to b so is c to d ."

REMARKS. — The points are, certainly, not read as the author asserts. The letters and points, taken together, are so read, however. Moreover, in the first quotation, the text reads, "quantities indicates," and why should it not, in the third quotation, read "points represents"?

4. "The following sign represents root, $\sqrt{}$. With small figures attached, thus, $^3\sqrt{}$, $^4\sqrt{}$, $^5\sqrt{}$, etc., indicates the third, fourth, fifth, etc., root."

QUERY. — What is the subject of the word *indicates*, in this quotation?

5. "This symbol, $a > b$, signifies that a is greater than b ."

REMARK. — The symbol is not $a > b$, but it is the character between a and b .

6. Simple quantities consist of a single term."

QUERY. — How many simple quantities consist of the single term a ? The author means that a simple quantity consists of a single term.

7. "The measure of a quantity is some exact factor of that quantity."

QUERY. — Is it quite obvious what an exact factor of a quantity is? The product of 6 , $\frac{a}{2}$, and $\frac{6}{3}$ is ab ; and is 6 , then, an exact factor, or a measure of ab ?

8. "The root of a quantity is some equal factor of that quantity."

QUERY. — "Equal" to what? How can one quantity, standing alone, be called equal?

9. "The square root is one of two equal factors."

REMARK. — If this be true, then 2 is the square root of 12 ; for the factors of 12 are 2 , 3 , and 2 ; and 2 is one of the equal factors 2 and 2 .

But, leaving the tenth and eleventh pages, I quote from other parts of the work.

10. "*The perpendicular cross, thus +, called plus, denotes addition.*" "*Quantities affected by like signs, when multiplied together, give plus.*"

REMARK. — The pupil is left to infer that the product of *a* and *b* is a perpendicular cross; for we find in the work, no definition of plus, except that given in the quotation above.

11. "*To reduce improper fractions to mixed quantities, divide the numerator etc.*"

QUERY. — "*The numerator*" of what?

Had the author used the singular number, and said "*to reduce an improper fraction, etc.*" the sense would have been obvious.

12. "*To reduce fractions to a common denominator.*"

QUERY. — How can fractions be reduced to a denominator? They may be as easily reduced to a numerator, or a triangle, or a metaphor.

But we need quote no more. Teachers can scarcely do a greater service to their pupils, than to demand, in recitations, even of the simplest character, a precise and accurate use of language. Such a demand would induce accurate habits of thought, and would secure more directly than almost any other means, the great practical object of the teacher's profession, the cultivation of the intellectual powers.

We scarcely need to add that no text-book should be introduced into a school in which thought is not expressed with perspicuity, precision, and good taste, and that no teacher should allow in himself the habit of using language which will not stand the test of a rigid criticism.

The errors which we have criticised above, appear more important when we consider that they are mostly found in the author's definitions of mathematical terms. Teachers are sometimes not aware how much of the obscurity of mind manifested by their pupils in regard to comprehending the subjects of their study, arises from their ignorance of the definition of the terms employed in treating these subjects. One of our own pupils, on one occasion, was found unable to understand the application of a rule for the quantity, or accent, of the penult of a Latin word. The rule seemed a plain one, and we saw no reason for the provoking obtuseness of the boy, till a friend, who sat by us, solved the diffi-

culty by showing that the boy did not know the meaning of the word penult. Let the teacher who reads this, ask his pupils in the study of arithmetic to write the definition of the word *common*, in the phrase "*common denominator*," and he, perhaps, will be surprised to find how few of them really comprehend the meaning of the word. Let him try a similar experiment in regard to the words "reduce," "multiple," "factor," "prime," "integral," etc. Moreover, it does not follow, that, because the pupil can repeat the definition of a term, he necessarily understands the definition. One of Webster's definitions of "network" is, "reticulated or decussated work." Now, this definition needs to be defined. So, too, when the mathematical term "*measure*" is defined to be "an exact factor," it is difficult to see what light the definition affords, until the word "*exact*" has been defined. The word "*factor*," also, in almost all works on arithmetic, is imperfectly defined.

"A factor of any number is a name given to one of two or more numbers, which, being multiplied together, produce that number."

Now, the popular work from which we take the above definition, calls quantities, like $2\frac{1}{2}$, numbers, (that is, mixed numbers). But would any one allow that 2 and $2\frac{1}{2}$ are the factors of 5, and that 5 is a composite number?

A better era in regard to the subject under discussion, is, we trust, approaching. Still, however, inaccurate, and even senseless expressions hold their place in the "latest editions, improved and revised."

We have opened, for illustration, a popular arithmetic, now very extensively used in the schools of the country. On page 134, we read that "*a prime number is a number which can be divided only by itself or a unit; as 1, 3, 5, 7.*" And yet the author shows, on page 162, that one of these very numbers, namely 5, can be divided by $\frac{1}{5}$. Again, we read of "*reducing fractions to a common denominator*," an expression which, as already suggested, is, in itself, devoid of meaning. But we confess that in this work we find but few points worthy of severe criticism. The glaring defects of older works on arithmetic but seldom appear in more recent treatises. Mr. Greenleaf's Introduction to the National Arithmetic, shows a great improvement, in accuracy, upon his

original work. Mr. Eaton's Arithmetic is written with such regard to accuracy of expression as to deserve the popularity which it has acquired.

In conclusion, allow us to suggest that, while the community is generously coming forward to the work of perfecting all the external arrangements of our school-houses and our schools, we are bound, as a profession, to strive to secure the highest point of excellence in all the best methods of instruction, and that the subject of this article affords to us one of the most useful and inviting fields of study and improvement.

WRITTEN EXCUSES.

MR. EDITOR:—Will you allow me a little space in your paper, for a few remarks relative to an article in the November number of the *Teacher*, under the caption of "Written Excuses?"

The author, "A. P. S." takes notice, at some length, of a previous article in the March number, and endeavors to prove, that the injustice complained of, is simply an instance of neglect, or want of care, or possibly, of misunderstanding, and that, too, not on the part of the teacher, but of the parent. I have a personal interest in this matter, I am the mother referred to.

If "A. P. S." will read over the article in the March number, in the light of his own rule, as found in his "Hints to Beginners," he may, perhaps, see the affair in a different aspect. The rule is as follows: "Do not be jealous of your authority. Insist upon obedience, and a compliance with all the requirements of the school, if occasion demands, but make allowance for the peculiar circumstances of your pupils, and avoid an imperious bearing, that will be repulsive to their better nature."

"A. P. S." says, "the statement of the case presupposes the existence of a rule which had not been set aside, although the mother had requested that in her case it might be done." In reply to this, let me say, that I sent a note to the teacher, stating the

circumstances, and asking that my boy might be excused without the formality of a written request. To this note I received no answer, and I supposed, of course, that the teacher acceded to what seemed to me so reasonable.

Again "A. P. S." says: "There comes to light neglect on the part of the mother, and this, in our view, is the turning point in the case. When the mother consented that the boy should be for a time, each morning, in the service of the storekeeper, from that moment the storekeeper became a competent person to give the boy an excuse; it was the duty of the mother to inform her son and the storekeeper, that an excuse thus obtained would answer every purpose. Had this been done, all the trouble and ill feeling would have been avoided."

"A. P. S." is a little hasty in his conclusions. The store in which the boy was employed was a milliner's shop, and when the girls came to their employment in the work room, the boy was dismissed, although the keeper of the store was not present. It was the duty of the girls to be there, in season for the boy to go to school, but it does not at all follow from that circumstance, that they were competent persons to excuse the boy for being late; on the contrary, giving them this power would have made it appear, to them and to the boy, that it was a very small matter whether he was late or not. I will not enlarge farther, although there are many other little circumstances which make the injustice of the case still more apparent. I felt indignant at the treatment which my boy had received, and wrote an article stating the facts for the *Springfield Republican*. From that article, your correspondent "E. D." probably obtained the information which has been the occasion of so much censure from the pen of "A. P. S."

A. F. R.

P. S. — I wish to say, in justice to the teacher, that it was his first term in that school, and he was, without doubt, confused by the number of new faces and new names; moreover he promptly acknowledged his error, and asked forgiveness of the boy.

FACING FACTS.

IF there is one thing that, more than any other, is impressed upon our mind when we look upon the real condition of our schools, it is the consciousness that the positive, and independent, and certain knowledge acquired by our pupils, is below the usual estimate formed of it, not only by parents and friends, but even by the teachers themselves. In other words, our pupils don't know so much as they have the credit of knowing. This false estimate might be a harmless, as well as a pleasing delusion, were it not for the sad consequences which such a delusion brings upon our schools. But, before detailing these consequences, let us look at the facts and the causes.

The fact that our pupils have acquired less than they are generally supposed to know, is usually attested whenever an intelligent stranger hears a class recite ; whenever a pupil passes from one school and joins another ; whenever a new teacher enters a school-room ; whenever a school is examined by written or printed questions, not made by the teacher ; whenever a boy, taken from school, attempts to apply his knowledge in the counting-room ; whenever, in short, anything occurs to disturb the routine of the school-room, or to throw the pupil upon his own resources. I do not know of a single case in which printed questions have been employed for the examination of candidates for admission to a school of higher grade, in which there has not been a general disappointment at the result. Such, I venture to say, is the testimony of the teachers of the Normal and High Schools of the State, in regard to examining candidates for admission to these schools. The very pupils who have just participated in a successful and splendid examination, at the close of their former school, come, loaded with the praises of school committee and friends, to be disappointed and chagrined by their most provoking and unaccountable blunders in passing the trying ordeal of an examination, in which they are thrown back upon their real attainments and their positive and independent knowledge.

I am convinced that the pride of the community would be some-

what wounded if the plain and simple facts, in the case in question, could be brought before the public.

Secondly, let us inquire for the causes of this over-estimate of the acquirements of our pupils.

First, the interests of committees, parents, teachers, pupils, all combine to give the most favorable representation of the success of our schools. No one is interested on the other side. Our schools are general objects of affection and pride. Almost no one is willing to traduce them. They are justly becoming, more and more, the objects of the highest interest to the man who loves his country and his race. The whole tide of interest and feeling setting thus in one direction, is it strange that the public judgment should be carried out of the channel of sober truth?

Again, the routine of the school-room is so soon learned by the intelligent pupil, that, falling into the line of march, he appears to move like a well trained soldier, when in truth he is only marching as he does, because the rest do the same. He soon learns the teacher's kind and suggestive way of putting question. He soon learns that the same kind of questions recur from day to day. He soon perceives that the teacher's mind runs to-day in the same channel in which it ran yesterday, and thus he knows what to anticipate, and makes the supply meet the demand. I have heard of text books, in a college, in the margin of which were written, by the kind-hearted student who used the book in the preceding year, friendly hints to his successor in ownership, in regard to the proceedings on the part of the professor. One note may read, "Here comes in the story of the identity of a jack-knife." Another may forewarn him of "the laughable account of the man who did n't believe in witches." At this last point the roguish fellow circulates a note in his class, assuring his class-mates of what is coming, and urging them not to laugh. In due order the story is told — the professor is in his best humor, he knows he is doing finely, and shall bring down the house. He prepares to join in the fun, throws himself back in his chair, and gives full vent to his feelings; — when, lo, the very rogues who almost provoked him with deafening applause at the last indifferent story, now witness his crowning effort without the slightest emotion. What did it mean? Why, simply this, that the professor, like too many other teachers, had

travelled so long in the same track, that his students knew precisely where he would put his foot down next, and prepared themselves for the event.

We believe that teachers are not generally aware how many perfectly needless questions they ask, — needless, because their pupils have long since heard them again and again, and are really hungry for something new. We have detected ourselves, we confess, in wasting our time in asking questions which we knew our pupils could answer, and in regard to which they needed no more instruction. We did it from habit. We forgot the past for the time, and simply repeated the past. We are not objecting to reviews, but we simply object to "vain repetitions," — to that listless mode of teaching in which the teacher works like a mule in a mill, walking the same unvarying round, day after day, till his pupils learn the step and need but little effort to keep up with their instructor. Such a teacher is not himself aware how sadly his pupils will fail when thrown upon their independent resources, or when any event breaks the routine of the school-room.

Public examinations of our schools often delude all who witness them. Many causes then conspire to tinge everything with the brightest colors. The teacher, however honest, then feels at liberty to show the fairest side of things. His reputation is at stake. His school is to be compared with others. He can hardly feel it his duty to expose the defects of his pupils. He is loth to ask questions which he fears cannot be answered. He does not believe it his duty to give prominence to his poorest scholars. The committee, too, sympathize with the school. They almost always flatter. They sometimes nearly shock us with praise which we know to be undeserved. But the spectators who, perhaps, have not had a good opportunity to judge correctly for themselves, believe the most flattering words and repeat them in the neighborhood. Thus the delusion spreads, till the community wonders at the astonishing progress of our modern schools. Old people, with a sigh, lament the ignorance in which they were reared, and bless their stars for the rich and wonderful advantages which their descendants are permitted to enjoy. Far, indeed, be it from us to undervalue these advantages, which we know are great and precious; we only wish to guard against the evils of grossly over-estimating them.

Again, there are causes of a more latent character, which tend to delude the friends of our schools in regard to the real attainments of our children. Prompting in classes is an evil, we mistrust, more widely spread than almost any one is aware of. There are so many modes of prompting ; it can be done so silently, that it is a shrewd teacher who expels the practice, in all its forms, from his classes ; whilst we suspect there are not a few teachers whose indifferent pupils often rely almost wholly upon their more intelligent classmates, in the recitation seats, for their success in reciting. We have witnessed a recitation in which pupils actually kept their books open before them. While the teacher is, perhaps, diligently searching for a new question, the pupil is as diligently searching for the answer. Such a pupil may make a fine show with a very small stock of knowledge. We might also refer to the great amount of aid which pupils derive, especially in the mathematics and the classics, from older and more advanced schoolmates, from published translations, from manuscripts left by former classes, from parents and friends at home, from working by rules which are not understood, from solving problems by rote or imitation of some other solution, from keys and notes, from almost any source except original, independent, patient thought. All these aids tend to give too flattering an aspect to the condition of a school. Even our colleges are not free from these evasions of study and reflection. Translations buttoned up under the student's coat, — leaves torn from a forbidden work and incorporated, by mucilage, into the student's text-book, — solutions of problems, or leaves from the Geometry or Calculus, appearing just at the right time through a hole in the floor, at the very feet of the anxious student, who relies for success upon his friend in the cellar ; — artful, cunning devices, which none but college students can invent, all conduce to set off a class with borrowed ornaments and to varnish over the real defects which a want of study and thought have produced.

Lastly, the evils of over-estimating the actual proficiency of our schools, are so obvious that we need only to refer to them.

First, and most patent, is the evil of removing pupils from their schools to places of business, under the impression that their education is thoroughly attained, when, in fact, it is as yet but well begun. This evil is, perhaps, the greatest which our schools

suffer, and it will not be suppressed until teachers and committees face the facts, and dare to disclose the precise truth. Better that there be no examinations than that the community should be deceived and deluded. Better that our schools should lose their eclat, than that our children should not be educated to think, to labor, to rely upon their own intellectual powers. If the parents of our pupils knew just how poorly and how well their children were educated, they would often allow them to remain longer in our schools. We should then have more classes than we now have which would not need to be lifted along by the toilsome labor of the teacher. We openly confess it, more than half of our own pupils are wading in water that is too deep for them. They have entered our school too early by a full year. They are studying Algebra, for example, but do not well comprehend Arithmetic. To apply the whip of reproof, or the spur of ambition, is of little service; the real difficulty is that they cannot draw the load. They have not thought enough. They feel their need, and grope about for aid. We repeat it; this is only true of a part of our pupils, but this part is far too large. We are mortified at the small number of our pupils who master the more difficult parts of our course of study by relying on their own powers. Under a false notion of their real attainments, these pupils have been urged along, almost always pursuing some study which is too difficult for them, almost never experiencing the delight of having done one hard thing, of having solved one real difficulty, without help.

The evil in question is, we fear, increasing. The time, forsooth, is approaching when new modes of instruction and improvements in our school books shall be such that our children will be educated at a much earlier age than now, and almost without the labor of thought. The time of going afoot shall cease, and every boy shall ride; the text-book shall be his coach and the teacher his horse.

Other evils might be mentioned, — evils to the health of mind and body, arising from advancing pupils to higher studies before they are mentally or physically able to pursue them; evils to the moral nature, by pretending to know more than one does know; evils to intellectual habits, by early indulging the mind in superficial modes of study; evils to character, by cultivating, in youth,

the habit of dependence upon others for aid, and thus failing to secure that true independence of mind and self-reliance, which are worth more to a man than all that he can borrow from all the libraries in the world. We view with pleasure the pride with which the community looks upon our schools; but, in order to warrant that pride, let us not be false to fidelity nor conceal the truth. If the parents are deceived, it is our duty to undeceive them. If our pupils are not as proficient as they are thought to be, it is our duty to face the facts and let the truth be known. No permanent advantage can come from concealment of the truth. But when the truth is fully known and embraced by the community, a better era, for the faithful teacher, will have come. Our labors will be more satisfactory, because our pupils will be pursuing only those studies which they are capable of comprehending. Our schools will be elevated in character, because our best scholars will remain longer under our tuition. Instead of infants, we shall teach boys and girls; instead of small boys and girls, our "back seats" will be filled with young men and young women. Fiction will give place to fact; pretence, to knowledge; translation and keys, to the text and the blackboard; and glorification and eclat, to successful labor, and sober satisfaction and content.

OUR FIRST EXPERIENCE WITH A SEWING MACHINE.

BY REV. HENRY WARD BEECHER.

AMONG the things which we did not, but now do, believe in, is the Sewing Machine. One thing after another had been invented; one machine after another had superseded manual labor, until human hands seemed about to go out of use, for any other mechanical purposes than those of lovers' pressures, orators' gestures, and for beaux and belles' gloves. But we always consoled ourselves that one or two things there were yet, which no machinery could perform. We could imagine children put through a whipping machine, and we had long been accustomed to seeing them taught by automatic

machines. There was a time-honored business handed down to us without a break from the garden of Eden, of courting — and kissing as one of its ordinances — no machinery could ever perform that. Machine poetry, and machine sermons we were familiar with. Babbage can make machines for ciphering, for computing logarithms, for casting up interest, but can he invent a machine for *saving* interest, and capital, too, for that matter? And! can there ever be a machine for answering letters? We would pay any price for a machine, into which letters being put, and a crank turned, there should drop out at the other side answers, as good as the letters folded, directed, and stamped.

But machines have steadily gained ground, and the iron muscle has relieved the flesh hand; machines for boring, sawing, cutting, planing; for making bread (I wish there was one for eating some of it), for pumping water, for making cattle draw their own drink. But, notwithstanding, we firmly believed that some things would never be done by any fingers except human, and eminent among these impossible things, was sewing! Nothing, we were sure, could ever perform that, except the latest and best invention of paradise — Woman!

When the rumors began to prevail, then, respecting an invented sewing machine, we lifted our eyebrows gently, and went on our way with a quiet consciousness that we could not be taken in by any such story. We regarded it as a piece with new found morality in old politicians, with the thousand annual rumors of some heaven-dawned virtue in Washington City — a mere device to catch the credulous.

But day by day the clatter grew. Indeed we surprised ourselves, with a coat sewed, in important respects, by machine. We saw linen pyramids of sheeting made for hotels and steamboats by sewing machines.

The case was growing serious, indeed; and at last it came to a head, when the head of the family informed us that a woman was to come, in a few days, with her Wheeler and Wilson, and do up the family sewing. Of course we submitted without a word. And the three capable persons of this household began to prepare matter for the machine to an extent which showed how perfectly they had been fooled by the story of its executive ability. Piles of

large stuff lay in each corner ; little stuff covered the table ; and miscellaneous stuff lay everywhere. We ran against button heaps, were in danger of getting tangled in webs of linen and sheeting at every turn, and such ripping, and tearing, and cutting, and basting as went on, would lead one to imagine that an army was to be clothed.

The day dawned. The woman came, and the iron Wheeler and Wilson came with her, only the lady had to act as beau, and offer her aid to wait on Messrs. W. & W. After a little there arose a hum from our chamber, not unlike the buzz of a wheat-mill, such as we have heard in a summer, sitting on willow trees on the edge of a stream, over against a red mill, white dusted. Soon we heard excited exclamations. Everybody seemed stirred up. The girls left their work ; the children forsook their playthings, and we followed the example.

There sat before the simple machine stand a fair young woman, some sixteen years old, whose foot like that of the old fashioned flax-spinners, was working the treadle with the nimblest motion. Then came the conviction, for the first time, that sewing was conquered and vanquished ! Long sheets, entering the fatal pass, streamed through, and came out hemmed, in a ridiculously short time. An hour's work was done up before your eyes in a minute. A shirt was set in, of such dimensions, that (we call Baron Munchausen to witness,) a man could not get around it by fair walking, in less than — well, in some time. It streamed through the all-puncturing Wheeler and Wilson about as soon as a good-sized flag, being hoisted, would unroll and flow out to the world. A bundle of linen took its turn, and came forth a collar, a handkerchief, a cap. There goes in a piece of cloth, there comes out a shirt ! We were bewildered. Not much was done for some hours in that house but gaze and wonder. We mistake. A good deal more was done, and done more effectually, than had ever been done in ten times the time before. What heaps of towels — what piles of sheets — what bedfulls of small trumpery — what bureaus-full of fine trash — what carpet littering sacks of unmentionable matters that make up the cloth inventory of household wealth.

The dismayed woman of the house saw her three days' preparation work melting away before noon, as a three days' April snow disappears in a few hours.

The voracious machine began to show its teeth and to demand more food—and now it was a fair race, whether two women could prepare as much as one machine could perform. It did our very souls good. At last, we hoped this was working fast enough. Oh, what early hours, has our lamp been made to illumine. Ah, what breakfasts have we eaten, and seen cleared away, long before the sun had touched even the cheek of day. What impetuous industry had glowed about the house, forenoon, afternoon, night, midnight—never enough, never overmatched. We grew tired even to look at it. At last, said we, you've got your match. Now, then, we will sit down and see this race, with a satisfaction that shall include years of revenge for disturbed indolence.

For a time the match was doubtful. Sometimes it was the machine that had the advantage and sometimes it was not. The contest was passing into the middle of the afternoon. It was doubtful. Sometimes the fast-driven needle evidently gained; then, again, in rounding up a sleeve-gathering, the needle flagged, and the hand-worked scissors gained. But iron and steel are more enduring, even, than a housewife's courage. And though for any single hour the hand could prepare faster than the machine could execute, yet taking the day through, Wheeler and Wilson had the advantage, and came out at dark decidedly ahead. That settled it. There was a revolution in this household. Our Miriam sounded her timbrel and triumphed over the cruel Pharoah of the needle, whose dynasty and despotism were ended.

Now, sewing is the family amusement. Our Wheeler and Wilson is played on a great deal more than our Steinway piano, and is the cause, too, of more real music than is ever got out of that instrument: for two canary birds, perched on either side of the book case, understand the first click of the sewing machine to be a challenge, and while the machine sings *staccato* they warble *ad libitum*, and between the *solfeggio* of the one and the *cantabile* of the other, we go crazy.

This subject is not yet sewed up. It will require a sober article to say the many edifying things that yet remain in our head on the subject of sewing machines and their kinds.

RULES AND DEFINITIONS.

MANY of the controversies that excite contending parties, and enlist their passions, are mere contests of words. They originate in words ; they are carried on in words ; and they end in words. If there were anything in the nature of words to indicate their exact and only meaning to all minds alike, such wordy controversies would hardly exist, or, if initiated, would be of short duration. Vain, however, would be the attempt, in general literature, to limit the meanings of words. But in scientific and mathematical works, we may, if we will, limit a word to a single definition.

Important and necessary as is strictness of language in mathematical works, we too often have occasion to regret great looseness in the language of such works, particularly in the definitions, and in the expressions of rules and principles, where exactness is the most needed. Many a student has stumbled over these imperfections into the notion that he has no "bump" for mathematics.

It is desirable that definitions should be such direct descriptions of the things defined, that the scholar may adduce them in the language of the book when they are called for. How should the scholar be better able than the author to put the definition into a practical form? If there be objection to doing too much for the scholar, there certainly is greater objection to confusing him by imperfect definitions, or by language which, taken literally, would not express the author's meaning.

The rules are generally expressed too abstractly, as well as too loosely, leaving the rationale of the rule too covert to be comprehended by a large ratio of students. Why should not the expressions of the several branches of the rule run parallel with the reasons for these steps?

As an illustration, let us observe the rule generally given for finding the greatest common factor of two or more numbers, viz.: Divide the greater by the less, and the less by the first remainder, etc. Here, it would seem, *division* is the important thing, and, of course, as the student has already learned, the *quotient* is the object sought. But how is he stumbled to learn, if he ever learns, that the quotients are of no consequence whatever, the remainders only

being of any importance in the inquiry. If anything is saved in brevity of statement, certainly more is lost in the progress of the student.

We will attempt the statement of a rule for finding the greatest common factor, though it must be confessed that it is one thing to find fault with others, and quite another to do better ourselves.

It is to be premised that the process, and, consequently, the rule, depends upon two principles. 1. The factor of a number is a factor of any multiple of that number. 2. The common factor of two numbers is a factor of their sum, and of their difference.

RULE. — Take the difference between the greater number and that multiple of the less which comes nearest in value to the greater number ; then take the difference between the less number and that multiple of the first difference which comes nearest to that less number ; and so on, comparing each successive difference with the next preceding, till no difference remains ; the last difference is the greatest common factor sought.

REASON. — Each of the differences is a difference between numbers which contain the factor sought, and therefore must contain it ; consequently, this factor cannot exceed the last or smallest difference. But each difference, multiple, and given number, is either a multiple of the last difference or the sum or difference of such multiples. Hence, the last difference must be the greatest common factor of the two given numbers.

Rule to find the greatest common factor of several numbers : — Arrange the numbers in a line ; then in a second line arrange the smallest of these numbers, and the differences between each of the others respectively, and that multiple of the smallest which comes nearest in value to it. In like manner form a third line from the second, and so on till a line contains only one number ; that number will be the factor sought. The reason is the same as that given above.

In an arithmetic the rule should, of course, be accompanied by a practical application to a problem ; but it may not be deemed necessary in this place.

The term factor is here used in its ordinary arithmetical sense. But why should there be one definition for the word factor in arithmetic, and two or three more definitions for the same word in

algebra? First the definition is limited to integral factors, exclusive of unity and the number itself; then unity and the number are admitted; then fractions are accounted factors; and, finally, on reaching logarithms, the student is permitted to take the highest degree, and be admitted to the knowledge of the general character of the word. Would it not be better to give the full idea at first, and then make such qualifications, from time to time, as may be necessary, thus not requiring the scholar to unlearn what he has previously been taught?

Perhaps some may think us too fastidious in our notions; but we are confident that we are not alone; and we hope that some day school books will be written in language which, taken literally, need not lead to error.

R.

TEACHING GRAMMAR.

THE stereotyped introduction to almost every treatise of English Grammar, is, "English grammar is the art of speaking and writing the English language correctly." We do not now propose to consider the incompleteness of this definition, though we feel impelled to remark, in passing, that it is not a little strange that this definition should have been given so often by grammar makers, without its having occurred to them that these ends were but a part of that which is to be secured by a thorough knowledge of the noble science of grammar; but we propose briefly to enquire how far the ends mentioned above are attained by the study of grammar, as it is commonly taught and studied in our schools. And first with reference to speaking the language correctly. How generally is a correct use of the language in speech, in common conversation, acquired by the pupils in our public schools?

What proportion of scholars in our public schools, who have studied grammar one, two, three, or five years, and have learned to parse readily, and perhaps to analyze the common forms of language, are generally correct in their use of words in conversation?

What proportion of the teachers, even in our public schools, are

free from the daily and often hourly use of incorrect expressions, which they would at once recognize as incorrect if they should see them in print, or were called upon to parse them? We very much fear that the answers to these questions must be, that, as a general thing, scholars do not learn to speak correctly, and, that many a teacher, in the use of words, daily sets at defiance well known and understood principles of grammar, and is thus constantly placing before the scholar examples unworthy of imitation. Many a teacher have we known who could parse "Paradise Lost" to the satisfaction of the most exacting committee, yet, in familiar conversation, after the examination was over, would repeatedly commit errors which shewed too plainly that there was somewhere a radical defect in his knowledge of principles of grammar, or of their application in speech, or rather, perhaps, we should say, there was shewn a gross carelessness, which was wholly inexcusable in one professing to be competent to give instruction.

The fact of which we are speaking is too common to need further illustration. It is notorious that many, the majority we may safely say, so far as our observation has extended, of both teachers and scholars, do not in common conversation, apply the rules and principles with the application of which they are familiarly acquainted, and which they readily recognize when the words themselves lie in sensible forms before the eye. Mistakes in pronunciation are of frequent occurrence, but we do not propose to speak of those now. Now, what is the cause of this lack of application of principles in common conversation? Is it to be found in the manner in which grammar is taught? We think that it is to a great extent, or rather that it results in a great degree from putting before the mind of the scholar an imaginary object of the study instead of the real one. Most scholars, we apprehend, think that to parse well is a great accomplishment, and that the ability to parse well is to be striven for as an end, instead of regarding it in its true light, as a means to a higher end, the power of using the language correctly; and as conducive to this result, the exercise of parsing is valuable, and little good results from the practice except this. The mere ability to name the parts of speech in any composition, and even to point out their relation to each other, is, in itself considered, of no great account. Herein, then, lies one great

occasion of the prevalence of this fault, to which allusion has been made. It is not kept before the mind of the learner as it should be, that he is to apply in conversation the principles which he hears explained, and which he finds illustrated in the printed lesson, and so too often supposes that when the lesson in grammar has been recited, that he is through with grammar for that day, and no further application of the principles of grammar will be needed, until the time comes for the next parsing lesson. Another cause of this state of things lies further back than the school room, — is not so directly under the influence of the teacher, and must be referred to the power of habit. If every child could be so situated as never to hear any incorrect forms of expression, all would then grow up good grammarians, so far as speaking the language is concerned, without effort, and without being aware of the knowledge possessed; just as a child of French parentage speaks French, or an English child, English, without being conscious of any effort to acquire it. But on the other hand, when a child grows up in the constant hearing of ungrammatical forms of expression, even before he is old enough to go to school, habits of speech become fixed, he will, of course, speak as he hears others speak, and then, when he begins the study of language, begins the struggle between what he has learned and what he sees to be right, and a hard struggle it often is. Too often, however, the system of instruction in grammar is such as never to lead the scholar to apply what he learns to his own use of words. He thinks that those rules apply when men write books, but never dreams that the principles which he studies all find an illustration in his own daily conversation, and therefore, never sets himself seriously to correct his own faults. Now what is the remedy for this state of things? Great watchfulness on the part of teachers, in the first place, to correct habitual errors in their own case, that they may not be stumbling blocks in the way of learners, and in the second place, let teachers accustom themselves to look at the study of grammar from another point of view, than that which regards parsing as one of the fine arts, and analysis as a graceful accomplishment which should be acquired by every scholar, though few scholars have any very definite idea what is the precise purpose for which they are studying it. Let the study of grammar be regarded primarily as the art of talking correctly, (although,

since thought precedes speech, the use of words as an instrument of thought, is, in fact, the primary truth in a full analysis of the end of grammatical study, yet, we do not think it would be advisable to urge this point upon the attention of young scholars,) and let that end be kept distinctly in mind. We say "talking" rather than "writing," since few, comparatively, become writers, at least to any great extent. In order to secure this end, it will be found to be a useful exercise, to spend considerable time in correcting those errors which are most common, and which members of the class have themselves noticed. Let the teacher be watchful to speak correctly himself, and also to correct whatever faults he may detect in his scholars. One who has never practised exercises of this kind, would be surprised to find what a sharp little body of critics he had raised up, with a very little training. And although it may not be within the power of the teacher to remove adverse influences which are affecting the speech of his scholars, still, he may prevent, to a great degree, these influences from exercising a controlling influence in the formation of habits. This is really the great difficulty in the way, in teaching scholars to talk. If a whole generation could be trained up to speak the language correctly, the labor of teaching the next generation would be comparatively slight. But the art of writing the language correctly, is also included in the study of grammar. Almost every one has occasion, some time or other, to write something which some one else is to read, and it is therefore desirable that every one should be able to express himself clearly and intelligibly, and scholars ought to be able to do this before they leave school. Great improvement has been made in teaching grammar in this respect, within a few years, and there is reason to hope that teachers generally, will adopt the most important practice of writing sentences, as one of the principal agencies by which skill in the use of language is to be acquired. As grammar was commonly taught a few years ago, and as it is now taught by too many teachers, it was the driest of all dry studies, few enjoyed it, almost none derived much practical benefit from it; but by accustoming the scholar to compose sentences, from the first, to illustrate every new principle which is explained to him, he is at once interested, and by continuing the same course of instruction, scholars acquire the

power, in a little while, of expressing their thoughts clearly and correctly.

It is of the utmost importance that the teacher set good examples before the scholar, for imitation, and it may be found to quicken the watchfulness of the teacher, to let his class feel at liberty in the critical exercise, to criticise his expressions as freely as he does theirs. Every teacher may do much towards securing a correct use of language by those who come under his care, and towards elevating the popular taste in the use of words; an end worth laboring for, and one which brings its own reward.

W.

JUVENILE BOOKS.

IN a recent number of the *Teacher* we endeavored to point out some of the reasons for a more close attention to the home reading of the young. As the time for holiday purchases again arrives, — when newspapers are filled with the titles of old favorites and new candidates for youthful approbation, and show-cases are *mosaiced* with illustrated and non-illustrated, with blue, and red, and brown, and gold bound volumes, — the question comes to parent and teacher, If this matter be so important, what books shall we recommend or buy? The fact, also, that the books purchased at this season will form a large item in the reading of the coming year, and that their character as gifts and souvenirs render them in a manner sacred to their readers, is one of moment. That the pool to which we come for slaking our thirst along the highway, without prestige or fame, should be preserved pure, and wholesome, and clear, is of untold importance; but that which is the resort of pilgrims, — where baths are frequent, and long draughts are renewed morning and evening, and around which there are, perchance, some sacred memories, — who may tell how it shall be guarded and tried, that not only no mixture of evil may lurk therein, but that its limpidness, its purity, and attractiveness, may remain preëminent.

The often-repeated remark, "I know not what books to get for my children," and the not unfrequent answer, "Any book with a red cover and showy pictures will suit them," both recognize a fitness or unfitness in books, and that there is some test whereby we may and should select works for the youthful readers. It is of this test we wish to speak. That such an one, or rather a variety of them, exists, is not doubtful. Their number and nature are of so much consequence as to need, perhaps, a more thorough discussion than can here be given. The canon that makes a red cover and striking illustrations sufficient, needs but the simple statement to show its absurdity, but it is, nevertheless, one in frequent and wide application. It contains a truth, but this is hidden and lost sight of by reason of a careless and superficial observation. The book in a beautiful dress is as much to be preferred as a well-dressed man; but whoever declares either as always most agreeable, even to the youngest mind, has read human nature far from correctly. We would not detract from the general admiration of elegant bindings, clear typography, and tasteful illustrations. These are the allies of culture, the signs of a high civilization. They are especially efficient in calling out, developing, and making active, those ideas of beauty and grace which are so essential to real refinement. The union of these with the right kind of thought and style, lends a peculiar charm and potency. This inner excellence, however, by no means consists merely in a pure, classical style and good sentiments, — it will be seen hereafter that we do not undervalue these; it is a "combination and a form," with the freshness of a living, cheerful spirit inspired throughout it. As the oxygen to the air, or the sunlight to the rainbow, so essential is freshness to that which we would have please the young. There may be exceptions, but most if not all of these are the result of morbid and diseased states of mind, and even these find an effectual antidote in the fresh, cheerful book. To secure for the young this requisite, we are led to ask still another, a conversational ease, grace, and directness in style and connection of thought. No book whose sense lies under a pyramid of words, or concealed in some "inner realm," ought to be placed before the mind until habits of thought are formed too firm to be confused by the necessary groping, and the reason has been accustomed so to follow a correct and logical course

as to do it despite the intricacies by which it may be attacked. This, we are convinced, is not attended to with sufficient earnestness, either by the home or public teacher, and to it we may attribute, in a good degree, so great a number of fickle, superficial, unsymmetrical, and illogical thinkers. Yet this conversational ease must not be a shallow expression. The writer who would not offend a healthy rhetoric in this regard must, indeed, possess a peculiar talent, offering much at once, yet calling for just sufficient of thought to exercise and not to puzzle or weary the mind too soon, and still further *suggesting* ideas that may not arise directly from the text, though legitimate and interesting. Of all departments of literature, this most strongly demands a suggestive style and best repays the labor expended in that direction. This, moreover, should be remembered, that it is a suggestiveness not for the man but the youth, and must lead whither he may go without being met by such difficulties as would give severe battle to a manly antagonist. To effect this, however, is of little greater difficulty than to give all the *variety* of incident, expression, and thought which is demanded, and still preserve a complete and symmetrical unity. Sameness of incident becomes not merely wearisome to the young mind, but absolutely mischievous in creating disgust, lessening the buoyancy of the spirit, which, indeed, can never be too great, and weakening the discursive faculties. It is a Procrustean bed, on which we may not place the soul without evil to it and its relations. The book will undoubtedly be read, if the youth can get no other, though it have a monotone of description from beginning to end ; but how does it habituate to a narrow range of imagination and fancy, and enfeeble the intellect, so as effectually to prevent any vigorous out-goings in directions of most healthful life and culture. It might be a serious inquiry whether Benjamin Franklin derived any of his power as a free, systematic, and vigorous thinker, from having read those old works which filled so much of a place in his earlier reading, were it not that his favorite model, amusement, and study, were the writings of Addison ; and did we not see in every expression the impress, and feel in every page the influence of the English Essayist. But with most youth not even the genial and correct pages of Addison could have so far obliterated the effects of that dry lore, which,

though excellent for its place, could but be inconsistent with the right growth and development of the young mind. The Greek philosopher's dictum, "Let no man come in hither who has not studied geometry," is but a partial enunciation of the same law of mind which requires this variety and range of incidents for its proper formation. The fact that he regarded the clear processes, the rigid yet perspicuous reasonings, the varied though legitimate combinations which geometry presents, as a necessary pre-requisite to the discussions of his school, is no mean commentary on the agency of these qualities, and furnishes a forcible suggestion to teachers of the present day.

This necessity for variety is, however, not more urgent than that of there being an essential unity. The human mind has a strong tendency to unification. We wish to systematize all things. Carried too far, this initiates error; but it speaks unmistakeably as to the nature of the mind and the nature of that which we should present to it for mental nourishment and entertainment. Too much earnestness in this matter is hardly possible. If we would heed at all the teachings of reason, it should certainly be in regard to a truth so vitally allied to the happiness and worth of our children. "Art," says the illustrious Cousin, "is the free reproduction of the beautiful; not of a single natural beauty, but of ideal beauty, as the human imagination conceives it by the aid of data which nature furnishes." The art of writing juvenile books should embody all this. In our choice of these for those who make glad our firesides by their youthful spirit, innocence, and hopefulness, we should demand this. The supply will follow the *course* of demand. If we therefore adhere to this, and rigorously exclude everything of a lower grade, we need be at no loss to find what we want and all we want. But our current taste seems to favor not a little of oddity in expression, smartness, and freeness of remark, and bold, high-wrought scenes. Nature is varnished, and life made too lively. This failing, which arises from our dislike of tameness in description or sameness in tone, is, to our minds, no less lamentable than extensive. It is said of an English poet that he became so affected by his early and undue use of spices as to at last crave a composition of the most powerful and injurious, laid as salve upon his tongue. This only could he taste; this only enjoy.

What more correct and fitting illustration of the excessive use of the spices of literature? We are not of the fastidiosi, but we would urge *purity* of style and expression. Let there be full, free, explicit speaking; but there is a world-wide difference between this and a parient strikingness. It is the difference between the Pilgrim's Progress and a sensation novel, only less in degree. The one is as the pure, bracing mountain air, the other as the exciting breeze that precedes the tempest; the one is the pure light of the starry world, the other the scintillations of eruptive fires, whose beauties speak of laboring woe behind. This purity of expression must, of course, rest on a basis of purity in sentiment. It can consist with nothing less. So would we have that book which is in any part tainted with immorality avoided as the seeds of a pestilence. With care for our youth in this particular, it were needless to say how much we might secure for them of honesty, honor, and purity. But we may not stop at the securing for them a pure morality in literature. Let it be required of every book for their perusal to show forth a high, a holy, and all-pervading faith in God, in humanity, in the attainment of truth, of the beautiful, of happiness. Correct in every fact, truthful in every description, buoyant in every tone, still the work is not perfect till this faith shall permeate all, shall "encamp around about all." Without it all may be as rich and well placed as some gorgeous palace and its costly adornings, yet the lord of the mansion visits it not; it may rival the magnificence of some wondrous cavern, but the chaste and marvellous crystals, the fretted roof, and murmuring cascades, are always cold, unilluminated. These are a few of the more prominent of the qualities which are to be desired in every book for youth; the importance of their application by private and public teachers we have tried to impress. They are tests which are easily applied. As such, we commend them to the earnest thought of all who would meet their responsibility in the education of the young.

Z.

DISCIPLINE not one faculty exclusively, for thou hast many. If thou canst not use the optic-glass in the dark, take the ear-trumpet,—by day reverse them.

FIRST NORMAL SCHOOL OF PENNSYLVANIA.

TEACHING A PROFESSION AT LAST! — If the question had been asked twenty years ago, Which of the numerous States of our national Union will be the first to earn for itself the honorable distinction of publicly recognizing the teacher's occupation as a liberal profession? who would have ventured to answer, Pennsylvania? But so the case stands in the record of fact. On the second day of December last the State authorities of Pennsylvania inaugurated the first Normal School of the State, at Millersville, near Lancaster. A full statement of the attending circumstances is contained in the *Lancaster Express*, from which we learn, among the many other cheering developments of the occasion, that the State document, which was then read, announcing the decision of the Inspectors to adopt the Millersville Institute as a State Normal School, empowers the future graduates of that seminary to receive, in addition to their diploma, *a State license, which exempts them from subjection to examination when applying as candidates for the situation of teacher, in any part of the State.*

Here, then, at last, the question is settled, which has, of late years, been so anxiously discussed by the friends of education. How may teaching be regularly constituted a profession? — and Massachusetts, hitherto the pioneer State in measures for the advancement of education, has been passed by slow and sure Pennsylvania. The normal graduate of *that State* is henceforward to carry with him a regular, legitimate protection from all extra-professional scrutiny whatever. His diploma, in full, is what all other regular professional documents of the kind are, a certificate of qualification, and an authority to practise, derived from purely professional sources and sanctioned by the State.

The characteristic caution of Pennsylvania, in all her State procedure regarding education, is fully exhibited in the history of her normal school law, and in its application to the establishment of her first normal school. Ample security has been taken that the normal diploma, which she sanctions, is to be no mere formal passport to professional occupation. The normal school law proposed no further inducement for the establishment of a State institution than

what was involved in compliance with the following conditions : That any private normal school which should furnish grounds not less in extent than ten acres, the requisite buildings, and all other appropriate accommodations for the instruction of three hundred students, a competent faculty of instruction for the training of teachers, —all to be thoroughly investigated, and duly certified by the board of State Inspectors ; but no movement on the part of the State to take place till three seminaries should have applied for such inspection, and no pecuniary or other benefit to be derived, even from successful application, beyond the bare, formal adoption and sanction of the institution, as one authorized by the State, in consequence of the decision of the inspectors, and affording the graduates of the school the benefits of an adequate, authoritative, professional diploma.

Small inducement this might seem for any community to launch into the large expenses insisted on in the case. But the friends of education in Millersville, and their liberal coadjutors in Lancaster county, headed by the enlightened board of trustees, and the indefatigable principal of the Millersville Seminary, previously known as the "Lancaster County Normal Institute," have claimed and nobly won the distinction of volunteers and pioneers in this special service to the cause of education. Land and buildings, amply and well adapted to the purposes of a State institution, and costing sixty thousand dollars, have been furnished by these public-spirited individuals, and fully approved by the inspectors. The instruction of the seminary, which has been successfully conducted for several years, under the able supervision and active exertions of Professor J. P. Wichersham, and a numerous and able body of special professors and assistant teachers, was subjected to a rigorous and close examination, for two successive days, by the board of inspectors, previous to the public announcement of their decision. The result was as has been already mentioned.

It is only necessary to add that a high standard of acquirements and qualification has been adopted in the institution now formally recognized as the "State Normal School of the First Normal District of Pennsylvania," embracing Lancaster, York, and Lebanon counties. The course of study, for teachers of common schools, extends to at least two years ; and, during the last six months of

the course, the candidate for a diploma is daily employed in the actual duties of a teacher, in the model school of the establishment, an arrangement which at once secures the classes of the model school against the disadvantages of incompetent instruction, and renders a diploma valid as regards the teacher's competency, not only in point of instruction, but, what is more important, of moral influence and skillful management.

Having just received a catalogue and circular of the institution at Millersville, containing a statement of its condition at the date of its adoption by the State, we are enabled to add the following particulars. The school is under the immediate control of a numerous and able board of trustees, coöperating now, of course, with the officers connected with the administration of the State system of education, viz.: the State superintendent and inspectors, and the county superintendents. The board of instruction consists of four professors, including the principal in the "normal," "scientific," and "classical" courses. In the "model" (primary), and "preparatory" courses, the instruction is conducted by a principal, three instructors, and six female teachers. The aggregate number of students, in all departments, for the year 1858-9, ladies, 123, gentlemen, 277.

W. R.

Mathematical.

SOLUTION OF NO. 3, FOR 1859.

[Suppose a tunnel, 1 foot in diameter, could be made from surface to surface, through the centre of the earth, and a grape-shot dropped into it from the surface, what would be its motion?]

It is, of course, implied that no air or other resisting medium should enter the tunnel. But by limiting the diameter to 1 foot, it is made certain that the shot should roll against the side of the tunnel. The path of the ball would not be a right line unless the tunnel was from pole to pole.

Permit me, also, to object to the use of the signs ' ' for minutes and seconds of time; they belong only to arc. See p. 471 of Vol. XII.

T. H.

Resident Editor's Department.

THIS number commences the thirteenth volume of our journal, and meets the reader with congratulations on the past, and well-assured hope for the future. The arrangements for the new year are such as we trust will make this publication at least as worthy of the confidence and support of teachers, parents, and friends of education, as it was in 1859. We have assurances of aid from some of the best men in our State, and in New England. The *Massachusetts Teacher* will be handsomely printed, and promptly published on or before the first day of each month. We rely upon those who wish it to be worthy of the cause to which it is devoted, for good counsel, good contributions, and large subscription lists.

THIRD SEMI-ANNUAL SESSION OF THE BLACKSTONE VALLEY ASSOCIATION OF COMMITTEES, TEACHERS, AND OTHER FRIENDS OF EDUCATION. — The meeting was held at Taft's Hall, in Uxbridge, on Friday and Saturday, November 18th and 19th. There was a good attendance. Lectures were delivered and remarks made by Rev. Mr. Norcross, on Reading; Mr. Sargent of Blackstone, on the science of Music and the best method of teaching Singing; Dr. Henry M. Brown of Medway, on Elocution; William L. Southwick, Esq., of Blackstone, on Education, contrasting the learning of Egypt, Greece, and Rome, with that of the present era; and Mr. F. H. Nutting, A. M., on Grammar. The following subjects were proposed and earnestly and ably discussed: "How shall the largest average attendance at School be secured?" "The Uniformity in School Books in the towns embraced within the limits of the Association;" "How to secure the best average attendance in School;" and "What is the best method for teaching Geography?" The following officers were chosen: President, George S. Taft, Esq.; Vice Presidents, Rev. George S. Ball and Adolphus F. Brown; Secretary, John G. Metcalf; Treasurer, S. G. Bates; Executive Committee, Rev. J. S. Haradon, Aaron D. Hill, William L. Southwick, Henry Carpenter, Charles A. Wheelock, Rev. T. Barber, and R. R. Clarke.

TEACHERS' MEETINGS. — The teachers of Somerville have formed an association for the purpose of mutual improvement in the important work in which they are engaged. They meet once a week. The teachers of Dorchester have passed a resolution to do the same, and will meet as soon as the appointed committee has made the necessary arrangements. The teachers at Newton have met once in a fortnight during the winter season for the last eight years, and their colleagues at Dedham once a week for the last three years.

AN interesting article on Sewing Machines, from the pen of Rev. Henry Ward Beecher, will be found on the foregoing pages; and we will add, that it was admitted on the repeated request of several fair readers of this journal. The

sewing machine seems to be destined to work a greater change in the occupation and comfort of ladies, and especially lady teachers, than is now expected. The number of patents granted at Washington for Sewing Machines, has been about three hundred. There are twenty-five manufactories in this country. About 1500 machines are sold every week, and over 100,000 are now in use in America.

PROFESSOR O. M. MITCHELL delivered recently in Philadelphia one of his astronomical lectures. The following statement of a remarkable fact is given in a report of the lecture.

"He had not long since met, in the city of St. Louis, a man of great scientific attainments, who for forty years, has been engaged in Egypt in deciphering the hieroglyphics of the ancients. This gentleman had stated to him that he had lately unravelled the inscriptions upon the coffin of a mummy now in the London Museum and that in which, by the aid of previous observations, he had discovered the key to all the astronomical knowledge of the Egyptians. — The zodiac, with the exact position of the planets, was delineated on this coffin, and the date to which they pointed was the autumnal equinox in the year 1722 before Christ, or nearly thirty six hundred years ago.

Professor Mitchell employed his assistants to ascertain the exact positions of the heavenly bodies belonging to our solar system on the equinox of the year, (1722 B. C.) and sent him a correct diagram of them, without having communicated his object in doing so. In compliance with this, the calculations were made, and to his astonishment, on comparing the result with the statement of his scientific friend already referred to, it was found that, on the 7th of October, 1722, B. C., the moon and planets had occupied the exact points in the heavens marked upon the coffin in the London Museum."

HEALTH, AND THE CAUSES WHICH PROMOTE OR INJURE IT. — Dr. Frank H. Hamilton has delivered an excellent address on Hygiene, before the graduates of the Buffalo Medical College. We make a few extracts :

"Within a few years our houses have been robbed of the domestic hearth, toward which so many associations have always centered, and air-tight stoves have been substituted for the iron dogs. Not content with this, the enemies to our race have still more lately taken away the stoves which, destitute of the essence, served to remind us at least, of the ancient fire-places; and instead, they have built for us iron furnaces — Etnas — under ground, so that now what of the oxygen we are not able to consume, and convert into carbonic acid, is vitiated by impure gas escaping from its hidden chambers, by invisible particles of coal dust, and by other impurities which clog up the air-cells, and close the avenues of life, or stick along the parched fauces as if reluctant to convey their poisons to the lungs.

"Stoves have, no doubt, abridged the sum of human life, but by these subterranean iron furnaces we are truncated — cut short in the middle. It is an error to suppose that hot-air furnaces can ever be so constructed or managed, at least in private houses, as not in any degree to prove detrimental to health. We wish we could persuade ourselves that this is not so, for it is certainly very agreeable, in a climate like ours, to enjoy throughout all the rooms and passages of the house, warm and uniform temperature; but it is just this even warmth which is one of the sources of mischief. The inmates are so little accustomed to the cold within doors, and become so morbidly sensitive, that they shudder at the idea of going out, and if they ever do venture into the air, the frost enters into their open pores, and they hasten back to their shelter, chilled, exhausted, and discouraged. They are no better able to endure the storms of winter than a plant reared in a hot-house. It was the venerable Bede, I think, who said, 'When men lived in houses of willow, they were of oak; but when they lived in houses of oak, they were of willow.'

"American gentlemen have adopted as a national costume, broadcloth, — a thin, tight-fitting black suit of broadcloth. To foreigners we seem always to be in mourning; we travel in black, write in black, and we work in black. The priest, the lawyer, the doctor, the literary man, the mechanic, and even the city laborer, choose always the same unvarying, monotonous black broadcloth; a style and material which ought not to have been adopted out of the drawing-room or the pulpit; because it is a feeble and expensive fabric; because it is at the north no suitable protection against the cold, nor is it indeed any more suitable at the south. It is too thin to be warm in the winter, and too black to be cool in the summer; but especially do we object to it, because the wearer is always afraid of soiling it by exposure. Young gentlemen will not play ball, or pitch quoits, or wrestle and tumble, or any other similar thing, lest their broadcloth should be offended. They will not go out into the storm, because the broadcloth will lose its lustre if rain falls upon it; they will not run, because they have no confidence in the strength of the broadcloth; they dare not mount a horse, or leap a fence, because broadcloth, as everybody knows, is so faithless. So these young men, and these older merchants, mechanics, and all, learn to walk, talk, and think soberly and carefully; they seldom venture even to laugh to the full extent of their sides.

"We need for our dwellings more ventilation and less heat; we need more outdoor exercise, more sunlight, more manly, athletic, and rude sports; we need more amusements, more holidays, more frolic, and noisy, boisterous mirth. Our infants need better nourishment than colorless mothers can ever furnish, purer milk than distilleries can manufacture; our children need more romping and less study; our old men more quiet, and earlier relaxation from the labors of life. All men, both young and old, need less medicine and more good counsel.

"Our cities need cleansing, paving, and draining. The Asiatic cholera, the yellow fever, the plague, and many other fearful epidemics are called the opprobria of our art, and our fellow-citizens upbraid us with the feebleness and inefficiency of our resources in staying their fatal progress. When will they learn that, although we do not fail to cure these maladies, the more precious secret of prevention is in our possession, and has been for these many years!"

ELECTROTYPING BY LIGHTNING. — In front of the Bibliotheque Imperiale, at Paris, there exists an open space ornamented with a large bronze fountain, which was coated with copper by the electrotype process. The operation was carried on in a workshop, built for the purpose, at the neighboring village of Auteuil. While the upper basin, from which the water flows through sixteen tigers' mouths, was in the bath of sulphate of copper, a violent thunderstorm burst over Paris, and the lightning fell close to the workshop in question. Immediately after the storm had subsided, the electrotyper caused the liquid to be poured off, in order to examine the vase, and to assure himself that the electric fluid had not deranged the deposit. He was extremely surprised to discover that the copper had been deposited on the tigers' heads in streaks or lines, and so happily arranged that they form a veritable tiger's skin, covered with hair in as perfect a manner as if they had been produced by the hands of a skillful engraver. This curious effect of the electric fluid has accordingly been allowed to remain, and the result is a great addition to the expressive character of the work. The fountain now erected, has a square garden round it, in imitation of those of London, and was inaugurated on Aug. 13th, previous to the emperor's *fete*. The successful completion of this, the largest work ever attempted by the electrotype process, will be followed by an application of a copper deposit on the fountains of the Place de la Concorde, and all the iron and bronze statues in the capital. — *Scientific American*.

BOSTON PUBLIC LIBRARY. — The Seventh Annual Report of the Trustees, the Examining Committee, and the Superintendent of this noble institution has been issued, and from it we select a few facts which will be interesting to our readers. Within the last year, 7192 volumes, and 1317 tracts have been added to the library. Of this number, 3405 volumes, and all the tracts were given by 252 individuals,

and the balance was purchased. The greater part of books bought, were paid for from the net income of funds given by Joshua Bates of London, Hon. John P. Bigelow and Hon. Jonathan Phillips of Boston. The Library contains now 78,043 volumes of books, and 19,255 tracts. Catalogues for the volumes in the lower hall (about 15,000 in number) have been published, and the work of preparing and printing the catalogue for the volumes which are kept in the upper hall is urged forward as fast as the magnitude and difficulties of the task will permit. The books in the lower hall are of a popular character, and in constant demand, while those in the upper hall are more of a scientific character, and therefore will be in less frequent demand than the others. The number of holidays has been diminished to Sundays, and the five holidays prescribed by law; and the time for the annual examination of books has been reduced from a fortnight to eleven days. Books can be taken out during ten hours of the day, and the Reading Room is now open from 9 o'clock in the morning to 10 o'clock P. M. The great object of the Library is "to furnish a large variety of works of practical value, most of which are not to be found in our circulating libraries or bookstores," for example, the books of use in some particular trade, which twenty mechanics may wish to consult in the course of a year, — the works on history, which, perhaps, fifty young men thirsting for knowledge would otherwise seek in vain, could not be purchased. It may be that in progress of time, this institution will become the parent of a circle of district libraries scattered about the city, each with separate resources, and exchanging occasionally their books. We cannot perhaps yet fully foresee the range of benefits which this first central experiment may draw after it for the community."

During the last fifteen months 13,329 persons have registered their names to secure the privileges of the library. The circulation of books during the ten months, ending with the first day of November, reached the high numbers of 149,468, an average of 588 books for every library day. The whole number of books missing is only 130; while 134 books were rendered unfit by use. But a larger number are soiled and dilapidated, and some have been wantonly defaced by the vulgar practice of writing upon blank leaves and margins. The total expenditure for the year has been \$27,337.

Among the donations made last year, is that of Dr. Stanislaus Hernisz, consisting of 347 Chinese books, which comprise valuable historical and literary works, and a copy of the large Imperial Dictionary.

Another valuable present was made by Mr. Bates. It consists of a collection of about 500 very valuable works relating to the history, science, and art of Music. These books were bought at an auction at Berlin, in Prussia, through the intervention of Mr. A. W. Thayer of Boston.

BOSTON. — The venerable Deacon Moses Grant has written the following interesting letter to the Lady Managers of the Children's Friend Society:

"NOVEMBER 1, 1859.

"*To the Government of the Children's Friend Society, Rutland Street.*

"LADIES: I regret my inability to be present at your always very interesting 'annual meetings,' which pays one for attending. You are engaged in a blessed work, and you may sometimes be discouraged, feeling you have not sufficient success in your benevolent efforts. You must not think so, for rest assured when you

reach the 'New Jerusalem,' you will find your labor has not been in vain in any case. It is now near thirty years in which I have felt it my duty to work for the young, and if I have ever done any good in the world, it has been with that class.

"At the Boys' Asylum and Farm School there have been *five* poor boys named *Brown*, and from *separate* families, *no* way connected, and are all doing well in the world, so that we think to make a sketch of the cases of five Browns; and, if done, a copy will be sent for your Institution. The cases stand thus:

"1. James O. Brown became a teacher in the Quincy School.

"2. Jacob Brown commands a ship for the 'East Indies.'

"3. Henry F. Brown is a graduate of Harvard College.

"4. Alvin Brown is the agent of the publishing house of Tallis & Co., London, and will be happy to see you at No. 14 Hanover street, up stairs.

"5. John F. Brown's case is so remarkable I must ask you (not to be tedious) to listen to a few interesting facts in the history of Fernandus (the fifth Brown.) He was born at sea, on our nation's birthday, 4th of July, 1831, on board the United States ship 'Constitution,' and is now 28 years old. He is one of the head men of Haverhill—a manufacturer of shoes. A few days since, this once an outcast sailor boy from North street, made me a call to introduce a very pleasant lady, being his *wife*, to whom he was married in July last.

"Now who can tell what the five Browns would have been if left to themselves?

"Be encouraged, then, remembering, also, that 'Paul might plant, and Apollos water, but God must give the increase.'

Yours truly,

M. GRANT."

The Boston School Committee has requested the Secretary to obtain the opinion of the City Solicitor as to *whether the School Committee is legally empowered to make rules and regulations designed to control the conduct of pupils on their way to and from school, and also whether the School Committee is legally empowered to make regulations designed to secure the personal cleanliness of the pupils of the public schools.*

THE GERMAN LANGUAGE is taught in the Cincinnati public schools, and the St. Louis papers are discussing the adoption of the practice there.

PROVIDENCE, R. I.—Mr. Daniel Leach, Superintendent of the public schools in this city, writes as follows in his last Quarterly Report:

"Our schools have suffered a serious injury by the loss of some of our best teachers, though their places have been well supplied, and in the best manner they could be with the means the Committee have had at their disposal, yet, a long time will be required to bring these schools to that degree of excellence they had attained before the change. The value of the services of good teachers increases in a geometrical ratio with their experience.

AMERICA has lost another great man. Washington Irving died at his residence on November 28, 77 years old. He had been in his usual health during the day, and had spent the early part of the evening in cheerful conversation with his brother's family; but on retiring to his bed-room, he suddenly fell forward and expired.

THE VERMONT SCHOOL JOURNAL is enlarging its circulation. Wherever an effort has been made by the town Superintendents, or other friends of education, a large list of subscribers has been secured. The towns to which the largest number of the *Journal* is sent, are Milton, 27 copies; Middlebury, 28; Chester, 30; Brattleboro', 34; Montpelier, 34; Burlington, 46; Waterbury, 50; Bellows Falls, 51; Northfield, 53; Hinesburgh, 78; Barre, 105. — We learn from a Vermont paper, that Mr. Hiram Orcutt, for twelve years Principal of Thetford Academy,

and for five years Principal of North Granville (N. Y.) Ladies' Seminary, has decided to establish and sustain a first class Ladies' Seminary at West Brattleboro.' A new building is to be erected under Mr. Orcutt's supervision, and the school opened in the autumn of 1860. Mr. Orcutt will remain at North Granville through the present term.

THE *Indiana School Journal* contains a circular, issued by the board of School Examiners of Monroe County, in which the principles are stated which will guide the board in the examination of teachers. The Journal says:

"It is a cheering sign of progress, that within the last year several of the best practical and 'live teachers' of the State have been appointed county examiners. They do thorough work. Thus only can lagging, half-way teachers be forced to improvement; thus only can the leeches of our profession be shaken off; thus only can we bring the mass of our teachers promptly up to county institutes and associations, and induce them, generally, to take the *School Journal*. Politicians make poor examiners; if qualified, they lack interest; they do not sympathize with our wants or movements; they lack *back bone*; they dare not endanger the loss of a vote by the refusal of a certificate. There may be a very few exceptions; but they are like the oasis of the desert, far apart."

INTELLIGENCE.

PERSONAL. — Mr. Dana P. Colburn, Principal of the Rhode Island State Normal School, at Bristol, was instantly killed on December 15th, by being thrown from a carriage. — ROXBURY. — All the present teachers in the schools of this city, have been re-elected for the year commencing February 1st, 1860. — Mr. Guilford D. Bigelow of Harvard, has been appointed Master of the Second Grammar School at Brighton; salary \$800. — Nathan Richardson, author of the "Modern School for the Pianoforte," and "Richardson's New Method," died at Paris on the 19th of November, 32 years old. His remains were brought over by his wife, and buried in Massachusetts soil on the 14th of December. — Prof. Dana, of Yale College, has gone to Europe to recruit his health. He will be absent about ten months. — It is expected that Prof. John A. Porter will commence a course of lectures on Agriculture sometime in February. — The Sophomores have voted as a class not to engage in the Burial of Euclid. — Joseph G. Hoyt, formerly teacher at Exeter, N. H., was inaugurated Chancellor of Washington University at St. Louis, on the 4th of October. — Mr. Nuttall, formerly Professor of Botany in Harvard University, died on the 10th of October at his residence, Nut Grove, St. Helens, Lancashire, in England, at the age of seventy-three. He is well known as a naturalist, traveller, and writer. The estate at Nut Grove was left to him on condition that he should reside on it. — Mr. Werden Reynolds, for the last three years Principal of the Worcester Academy, has resigned his place, and accepted the Presidency of the Worcester Female College, to which he was elected in August last. — Dr. Walker has resigned the Presidency of Harvard College.

Leander Waterman has been elected Principal of a Grammar School in Milford, Mass., salary \$600. — Mr. Wm. T. Adams has been chosen Master of the Boylston Grammar School, Boston.

MICHIGAN. — The Normal School building in Ypsilanti, was totally destroyed by fire on Friday night, Nov. 4., together with all its contents, save the philosophical apparatus, and some of the appurtenances belonging to the analytical laboratory, which, being upon the first floor, in a portion of the building remote from the origin of the fire, were saved; the total loss, therefore, is about \$27,000, with \$10,000 insurance. Arrangements have already been made so that the school will continue without any interruption whatever, not even the loss of a recitation. — *N. Y. Teacher.*

THE Department of Law in the State University was inaugurated Oct. 3d, by an address from Hon. James V. Campbell. On Oct. 4th, the University, Regents, Faculties and Students, was addressed by President Tappan. He remarked that the University is now complete except in the Theological Faculty. This being the University of the State, which recognizes no State religion, it is impossible that a Theological Faculty should be organized here. But such professorships as are not of a sectarian character, might be hereafter added to the present Faculties. Seventy-five law students have been registered.

COMMON SCHOOL SYSTEM OF MISSOURI. — We take the following items from an address read before the Missouri State Teachers' Association, July, 1859, by W. B. Starke, State Superintendent of Common Schools, and published in the November number of the *Missouri Educator*.

The State Constitution requires that "Schools and the means of education shall forever be encouraged. One school, or more, shall be established in each township as soon as practicable and necessary, where the poor shall be taught gratis." The present School Law was passed in 1853. There is at the head a Superintendent, who is elected biennially by the people. Each county has a Commissioner of Common Schools, whose duty it is to examine teachers and grant certificates of qualification; apportion the school moneys of his county; call meetings of the voters, when necessary, and visit the schools. Each Congressional township is a school township, which may be divided into as many school districts, not exceeding four, as the inhabitants may desire. Each district is under the control of three trustees, who employ teachers, levy taxes, etc. Twenty-five per cent. of the State revenue, and the dividends arising from the funds invested in the Bank of the State of Missouri, are annually apportioned, by the Superintendent, to the several counties, in proportion to the number of children in each between five and twenty years of age. This, together with the county funds, composed of the interest upon the monies arising from the sale of the sixteenth sections, the fines, penalties, etc., accruing to the county, and the income derived from the proceeds of the swamp and overflowed lands, constitutes the amount annually appropriated to the payment of teachers' wages, and is divided amongst the school districts in proportion to the number of children in each.

The capital of the School Fund is now \$680,000. In the year 1858 there were in the State 4916 school districts; 3878 school houses; 31 colleges; 100 academies; 4198 male, and 855 female teachers; 367,248 children between five and twenty years of age; \$580,767 were paid to teachers, and \$107,599 for building and repairing school houses.

It is a hindrance to the complete and general introduction of this school system, that in some parts of the State the population is too sparse to admit the establishment of even one good school in a township six miles square. A greater evil is the apparent apathy manifested by many of the people. In some districts, the majority of the people, instead of regarding the public school monies as a simple encouragement to them to do their duty, trust to it to accomplish the whole work of educating their children. When the annual apportionment is made, such a district will employ a teacher for three or four months, until their public money is exhausted, and then the school house will be shut until the next year brings another apportionment.

Missouri is not without her model schools and teachers. Especially has St. Louis set an example worthy of all honor. But there is a great want of a sufficient number of well-qualified, professional teachers, who would take hold of the work, not from a selfish or temporary interest, but as a lifetime business. The man who would undertake to practice medicine to-day, law to-morrow, and blacksmithing the next day, would be regarded either as a fool or a madman. Yet in this most difficult and delicate of all undertakings, — the proper training and developing of the youthful mind, — persons frequently enter upon the business without any adequate preparation, and, what is fortunate for the pupils, many of these soon leave it in disgust.

WISCONSIN. — We have received a copy of the *Wisconsin State Journal*, Nov. 29, which gives a very full and not less interesting account of a Teachers' Institute, which has been held at Madison, under the auspices of Chancellor Barnard. If the February number of our publication should afford us some space, we shall be glad to give some extracts.

THE MAINE STATE TEACHER'S CONVENTION has been held at Waterville, Nov. 18th and 19th.

EDUCATION IN KANSAS. — Circulars have been distributed, which give definite information in regard to a proposed College in Kansas. It is to be called "Monumental College," from the circumstance, it is presumed, that the remains of those who fell while defending the cause of freedom in Kansas will be buried beneath its walls. It is likely to be located at Lawrence, where an eligible site has been offered. Under an obtained act of incorporation, an organization has been effected. Several influential men in the Territory have promised to work for it. Subscription lists are in circulation, in which already building materials and sums of money are obtained. A citizen of Massachusetts has given securities for \$11,000, besides 150 shares in the stock of the New England Emigrant Aid Company, on condition that \$20,000 additional shall be raised before January 1st, 1861. The Receiving Committee are Messrs. Ezra Farnsworth, Edward S. Tobey, and John Field, of Boston. S. N. Simpson is Collecting Agent. The Reference Committee consists of Prof. Park of Andover, Rev. F. D. Huntington of Cambridge, and Rev. Chas. Mason of Boston.

UPPER CANADA. — During the recent Assizes at Toronto, the Grand Jury delivered to Chief Justice Draper, the presiding judge, a presentment, from which we make the following extract :

"Referring to the subject of education, and to the fact that notwithstanding com-

mon schools are so numerous, and so amply provided for the instruction of the masses, our streets are nevertheless filled with children who do not take advantage of them, and who wander about as common vagabonds and pests to society, the jury are, in common with the intelligent portion of the community, made painfully aware of the fact that our school system has not produced all the good effects which were expected to flow from it when the Legislature made such ample provision by compulsory taxation for the general diffusion of secular knowledge; and they believe that the only way to make education effective in elevating the masses, is by making attendance at school of children within certain ages, and for a certain number of days in the year, compulsory. Whether, besides compulsory attendance, and the teachings and principles of mere secular knowledge, as now taught at our free schools, the youth of the country might not receive such moral training, so that their duty towards God, and their duty towards their neighbors, might be forcibly impressed upon their minds, without interference with the religious prejudices of our mixed population, the Jury are not prepared to express an opinion. Should the evils arising from the want of such instructions be brought home to the minds of the people and the Legislature, as it has been to that of the Jury, they believe means might be devised to, in some measure, lessen the evils complained of. The Jury hail with satisfaction, the establishment of the reformatory institutions alluded to by your Lordship."

LOWER CANADA. — The Corporation of St. Ann's College has recently established a School of Agriculture. The building was solemnly blessed on the 9th of September by His Lordship the Bishop of Tloa. After mass, the Rev. Mr. Quer-tier delivered an address, in which he spoke of the dignity of labor. Aspirants who wish to be admitted, should be aged eleven years; be able to read and write French correctly, and understand the first four rules of arithmetic. Satisfactory certificates as to moral character must be produced before admission.

"All, without distinction of fortune or of birth, are required to share, according to their strength, in the labors of the farm. No uniform required for the present. It is desired, however, that the pupils wear a black coat on Sundays and Festivals. They should be provided with clothes suitable to farm work. The pupils will take their meals in such houses in the vicinity of the school as may be approved by the director; they will sleep in a dormitory in the school house, where they shall be under the care of a master. The pupils will provide for their board and support.

"*Instruction.* — The course of instruction will last two years for pupils sufficiently advanced; for others, three years. The instruction will be theoretical and practical. Adjoining the school are 140 *arpents* of ground for practical lessons. The theoretical instruction will comprise, besides religious instruction, French grammar, writing, and arithmetic, the elements of surveying, of geography, of the history of Canada, the general principles of agriculture, of practical Botany, of physics and chemistry, the veterinary art, the culture of fruit trees, horticulture, and such knowledge of accounts as may be useful in the management of a farm.

"Besides the land destined for the distribution of crops, (*assolement*), a tract of considerable extent will be exclusively devoted to agricultural experiments. It will be a field of studies, a small farm of experiments, where the merits of new implements of husbandry may be tested and such plants as may be useful in the country acclimated.

"Terms: \$24 per annum, payable half yearly in advance." — *Journal of Education.*

SAN FRANCISCO, CAL. — The *Daily Evening Bulletin* contains an abstract from the annual report of James Denman, Superintendent of Public Schools in San Francisco, from which we take the following facts: The city and county of San Francisco form but one School District, in which there are now 3885 boys and 3882 girls between 4 and 18 years of age; 341 orphans; and 6091 children not

yet four years old. The Schools are divided as follows: 1 High, 8 Grammar, 6 Intermediate, 10 Primary, 1 Colored Mixed, 2 Evening, 1 Foreign Evening, 1 Chinese, and 1 Industrial. There are now 4 brick school houses and 12 wooden ones; 43 private schools and academies, with 1345 pupils; and the time during which school was maintained was 9 1-2 months. Total amount of expenditure for school purposes in the District, \$134,731. A monthly salary of \$80 to \$105 is paid to every Primary and Intermediate school teacher; from \$100 to \$200 are paid to Grammar school teachers; and the salary of the four teachers of the High school is respectively \$100, \$125, \$240, and \$250. The total number of pupils in all the public schools was last year 5273; and the daily average attendance 2521.

BOOKS RECEIVED:—*De Turcarum Linguae Indole ac Natura*. Scripsit F. L. O. Roehrig, Philadelphia, MDCCCLX. — *Catalogue of Antioch College* for the Academic year 1859–60. Yellow Springs: H. H. Burkholder. 1859. — *An Inaugural Address*, delivered at Antioch College, Yellow Springs, Green County, Ohio, September 8, 1859. By Rev. Thomas Hill of Waltham, Mass. Boston: Little, Brown & Co. 1859. — *The Pulpit and Rostrum*, No 9. A Cheerful Temper; a discourse by Rev. William Adams, D. D. New York: H. H. Lloyd & Co. 1859. — *Illustrated Descriptive Catalogue* of the publications of A. S. Barnes & Burr, comprising the National Series of Standard School Books, and a select list of Library Books. New York: 51 & 53 John Street. — *A Lecture on the Dignity and Duties of the Modern Teachers' Profession*, delivered before the Teachers' Institute in Greenwich, N. Y., October 20, 1859. By Hiram Orcutt, Principal, North Granville Ladies Seminary. Granville, N. Y.: C. M. Haven, Register Office. 1859.

BOOK NOTICES.

SELF-EDUCATION; OR, THE MEANS AND ART OF MORAL PROGRESS. Translated from the French of M. LeBaron Degerando, by ELIZABETH P. PEABODY. Third edition, with additions. Boston: T. O. H. P. Burnham. 1860.

We place before our readers the title of a book which deserves to be more widely known in our country than it is in France. It treats one of the most important subjects in a manner which cannot fail to attract the attention of the reader, nay, even win his heart. Its rich contents are drawn from the fountains of religion and philosophy; and though they may not be able to satisfy entirely the minds of some who cling to creeds rather than to the Scriptures, or who are always longing for a deeper meaning, they will prove a source of information and elevation to all who seek. We should be glad to give some extracts, but we do not know where to begin nor where to stop. The work is beautifully printed on tinted paper.

THE ART OF ELOCUTION, EXEMPLIFIED IN A SYSTEMATIC COURSE OF EXERCISES. By HENRY N. DAY. Revised edition. Cincinnati: Moore, Wilstach, Keys, & Co. 1860.

This book numbers 384 pages, two-thirds of which contain exercises which are in part interspersed with the rules of Orthoepey and Elocution proper to be found in the first part of the volume. The author has followed Dr. Rush, but not indiscriminately; and those deviations which we took the pains to examine, were found to be decided improvements. The work contemplates the aid of a teacher, who understands, practically, the particular movements of the voice and can exemplify them. Such aid is as important in elocution as in music. The fact that a new edition was needed strengthens our conviction of the merit and usefulness of this work.

HISTORY OF INDEPENDENCE HALL: FROM THE EARLIEST PERIOD TO THE PRESENT TIME. Embracing Biographies of the Immortal Signers of the Declaration of Independence, with Historical Sketches of the Sacred Relics preserved in that Sanctuary of American Freedom. By D. W. BELISLE. Philadelphia: James Challen & Son; New York: Sheldon & Co.; Boston: Brown, Taggard, & Chase.

The title of this work indicates its contents, which we think will be read with more than ordinary interest on account of the attractive language in which some of the most important and interesting facts of American history are presented. The volume contains several appropriate illustrations on tinted paper, and we hope will be procured by many a patriotic family, and for every library throughout the country.

KEY TO CLARK'S GRAMMAR: in which the Analyses of the Sentences in the Grammar are indicated by Diagrams. New York: Published by A. S. Barnes & Burr, 1859.

The aid which Mr. Clark has afforded to teachers will be highly gratifying. We hope that a large sale may compensate the author for the labor he has bestowed on this work.

THE STUDENT AND SCHOOLMATE,

If we may judge from the January number, just issued, is now in the hands of publishers who are determined to make it superior to anything of its class in the country. Rev. Jacob Abbott, who has been engaged as a stated contributor, is undoubtedly the most popular writer for children in the country, and we have no doubt that his connexion with the magazine will at once secure a large addition to its list of subscribers. Its particular merits are pointed out in an advertisement on another page.

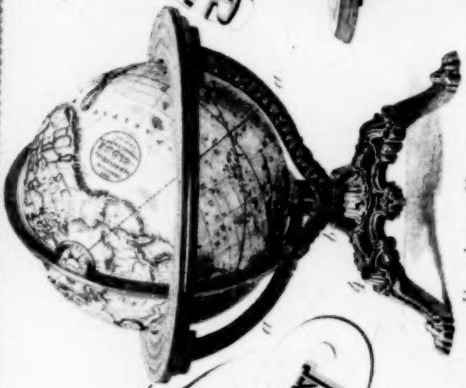
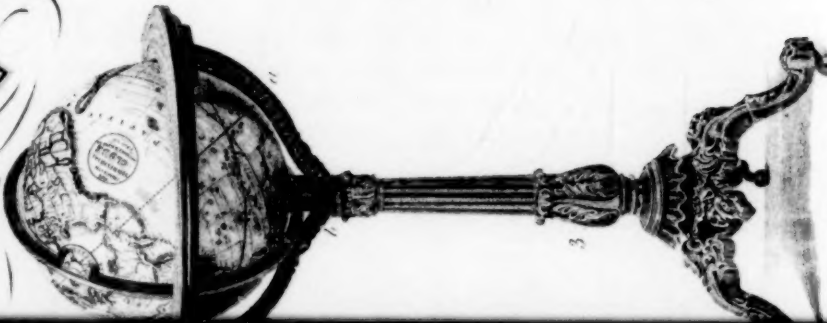
AN INTELLECTUAL GAME. — We have seen a new game for young people, called "American Historical Quartetts," which, as a teacher, has pleased us much. The theory is, that with the bright fire, clean hearth, and "rigor of the game" of gentle Charles Lamb, — father, mother, all the children, and the master who has just dropped in, sit down round the table, play according to directions, stop every little while to hang an anecdote to some great name, or a three minutes talk to some greater event. The object, of course, is amusement; the result is, — "pleased and instructed too." And we are doing some good, we think, when we advise teachers to encourage their use at home during the holidays, and the long winter evenings; assuring them that their "hard cases" will marvel at how much they know "before they know it." We have had too much of the frivolous in this line. See advertisement.



ARTICULAR

INTERALTERNATE

STANDARD



Revolutionary
The Axis is a revolution on a pivot at b.

on a pivot at b.